

AMENDMENTS TO THE CLAIMS

In the Claims:

The following listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims:

1-2. (Canceled).

3. (Currently Amended) ~~The mobile communication terminal according to claim 2,~~
~~wherein said detector (5, 6, 7) includes~~ A mobile communication terminal, comprising:

a receiver receiving radio signals from base stations;

a detector detecting spread codes from said signals received by said receiver, said detector including:

a slot timing detector ~~(5)~~ detecting slot timing from the signals received by said receiver ~~(2)~~,

a frame timing and code group detector ~~(6)~~ detecting frame timing and a code group based on the slot timing detected by said slot timing detector ~~(5)~~ from the signals received by said receiver ~~(2)~~, and

a code detector ~~(7)~~ detecting a code based on the slot timing detected by said slot timing detector ~~(5)~~ and the code group detected by said frame timing and code group detector from the signals received by said receiver; ~~(2)~~.

a demodulator demodulating the received signals with the spread codes detected by said detector;

a decoder decoding data demodulated by said demodulator; and

a control unit controlling a cell search process, and stopping signal processing of the cell search in response to detection of an invalid frame timing, code group or code based on information received from the base station.

4. (Currently Amended) The mobile communication terminal according to claim 3, wherein said control unit ~~(4)~~ stops the processing of received signals when the code group detected by said frame timing and code group detector ~~(6)~~ is not a predetermined code.

5. (Currently Amended) The mobile communication terminal according to claim 4, wherein said frame timing and code group detector ~~(6)~~ includes:

a plurality of code generators, each of said code generators generating a code corresponding to a different code group,

a plurality of dummy code generators generating dummy codes different from the code groups generated by said plurality of code generators ~~(15-1—15-M)~~,

a plurality of correlators calculating correlations between the signal received by said receiver ~~(2)~~ and the codes and dummy codes generated by the plurality of code generators and the plurality of dummy code generators, respectively, and

a determining unit ~~(18)~~ determining invalidity of the detected slot timing based on the calculation result of said plurality of correlators.

6. (Currently Amended) The mobile communication terminal according to claim 3, wherein said control unit ~~(4)~~ stops the signal processing of the cell search if the code detector ~~(7)~~ detects a code group other than a code group including the predetermined code.

7. (Currently Amended) The mobile communication terminal according to claim 6, wherein said code detector ~~(7)~~ includes:

a plurality of code generators, each of said code generators generating a different code,

a plurality of dummy code generators generating dummy codes different from the codes generated by said plurality of code generators,

a plurality of correlators calculating correlations between the signal received by said receiver ~~(2)~~ and the codes and dummy codes generated by the plurality of code generators and the plurality of dummy code generators, respectively, and

a determining unit ~~(22)~~ determining invalidity of the detected slot timing based on the calculation result of said plurality of correlators.

8. (Currently Amended) A mobile communication terminal comprising:

- a receiver (2) receiving radio signals from base stations;
- a detector (5, 6, 7) detecting spread codes from signals received by said receiver (2),
- a demodulator (8) demodulating the received signals with the spread codes detected by said detector (5, 6, 7);
- a decoder (9) decoding data demodulated by said demodulator (8); and
- a control unit (4) dividing a slot into a plurality of search ranges, deleting multipath in said search range, successively allowing said demodulator (8) to demodulate the received signals, allowing said decoder (9) to decode the demodulated data and stopping the decode processing if the frame timing, code group or code in said search range is invalid.

9-13. (Canceled).

14. (Currently Amended) ~~The communication method according to claim 13, wherein said step of stopping the signal processing of the cell search process includes the steps of A~~
communication method, comprising:

receiving radio signals from base stations;

detecting spread codes from said received signals, including:

detecting slot timing from said received signals,

detecting a code group based on said detected slot timing from said received signals, and

detecting a code based on said detected slot timing and said detected code group;

demodulating the received signals with said detected spread codes;

decoding said demodulated data;

controlling a cell search process;

stopping the signal processing of the cell search if the frame timing, code group or code is invalid;

stopping the signal processing of the cell search if the code group received from the base station is not a code group including a predetermined code, and

wherein said stopping the signal processing of the cell search includes:

generating codes corresponding to a plurality of different code groups,
generating dummy codes different from said codes,
calculating correlations of said received signals with respect to said generated codes and dummy codes, and
determining invalidity of the detected code group based on a result of said calculation.

15. (Currently Amended) The communication method according to claim [[12]] 14, wherein said step of stopping the signal processing of the cell search includes the step of stopping the signal processing of the cell search if the code received from the base station is not a predetermined code.

16. (Previously Presented) The communication method according to claim 15, wherein said step of stopping the signal processing of the cell search includes the steps of:

generating a plurality of different codes,
generating a plurality of dummy codes different from said plurality of different codes,
calculating correlations of said received signals with respect to said plurality of different codes and said plurality of dummy codes, and
determining the invalidity of the detected slot timing based on a result of said calculation.

17. (Previously Presented) A communication method comprising the steps of:

receiving radio signals from base stations;
detecting slot timing from said received signals;
detecting a plurality of paths within each slot;
detecting spread codes from said received signals;

for each of the plurality of paths, deleting multipath of the spread codes already detected within a predetermined time period;

successively demodulating the received signals subjected to the deletion of the multipath with said detected spread codes; and

decoding said demodulated data.

18. (Original) The communication method according to claim 17, wherein said decoding processing is not performed in said step of deleting the multipath if the newly detected code is the multipath.

19. (New) A communication method, comprising:

at a receiver, receiving radio signals from base stations;

detecting spread codes from the received signals, including:

detecting slot timing from the received signals,

detecting frame timing and a code group based on the detected slot timing, and

detecting a code based on the detected slot timing and the code group;

demodulating the radio signals with the detected spread codes;

decoding the demodulated data; and

controlling a cell search process, and stopping signal processing of the cell search in response to detection of an invalid frame timing, code group or code based on information received from a base station.

20. (New) The communication method according to claim 19, wherein the processing of received signals stops when the detected code group is not a predetermined code.

21. (New) The communication method according to claim 20, further comprising, at a frame timing and code group detector:

generating a plurality of codes corresponding to different code groups;

generating a plurality of dummy codes different from the plurality of codes;

calculating correlations between the received signals and the plurality of codes and the plurality of dummy codes; and

determining invalidity of the detected slot timing based on the calculation result.

22. (New) The communication method according to claim 19, wherein the signal processing of the cell search stops if a code group other than a code group including the predetermined code is detected.

23. (New) The communication method according to claim 22, further comprising, at a code detector:

generating a plurality of different codes,

generating a plurality of dummy codes different from the plurality of different codes,

calculating correlations between the received signals and the plurality of codes and the plurality of dummy codes; and

determining invalidity of the detected slot timing based on the calculation result.